

WHAT IS CLAIMED IS:

1. A method for assigning a network address upon request to a process executing on a processor, comprising:
 - 5 determining whether a local network address residing in memory of the processor is available; and
 - assigning the local network address to the process in favor of other network addresses if the local network address is available.
- 10 2. The method as set forth in claim 1, wherein the other network addresses are remote network addresses residing in memory of other processors.
3. The method as set forth in claim 2, further comprising allocating one of the remote network addresses if the local network address is not available
- 15 4. The method as set forth in claim 1, further comprising determining that the process is executing on the processor.
5. The method as set forth in claim 4, further comprising sending information
- 20 in the request identifying the processor.
6. The method as set forth in claim 1, further comprising using an addressing table to store the local address and the other network addresses.
- 25 7. The method as set forth in claim 6, wherein the addressing table is a data structure.
8. The method as set forth in claim 7, wherein the data structure is a hash table.
- 30 9. A computer-readable medium having computer-executable instructions for performing the method as set forth in claim 1.

10. A network address allocation system for assigning a network address, comprising:

- a multi-node server having a plurality of processors;
- memory for each of the plurality of processors, with each memory
- 5 containing at least one network address;
- a process executing on one of the plurality of processors capable of making a network address request; and
- a network address allocator that receives the network address request and allocates a local network address located in the memory of the processor executing
- 10 the process.

11. The network address allocation system as set forth in claim 10, wherein the memory for the processor executing the process is local memory.

12. The network address allocation system as set forth in claim 10, wherein the memory for the processors not executing the process is remote memory.

13. The network address allocation system as set forth in claim 10, wherein the network address allocator further comprises an addressing table containing a list of the network addresses located in the memory for each of the plurality of processors.

14. The network address allocation system as set forth in claim 10, wherein the network address request contains information about the processor that is executing the process.

15. A method for assigning a network address, comprising:

- receiving a network address request from a process executing on a processor;
- determining whether a network address contained in a memory of the
- 30 processor is available; and
- assigning the network address, if available, in response to the network address request.

16. The method as set forth in claim 15, further comprising providing information in the network address request that the process is executing on the processor.

5 17. The method as set forth in claim 16, further comprising using the information to identify the memory of the processor.

18. The method as set forth in claim 15, wherein the network address is a local network address and other network addresses contained in a memory of other
10 processors are remote network addresses.

19. The method as set forth in claim 18, wherein assigning the network address includes assigning the local network address in favor of the remote network addresses.
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20. The method as set forth in claim 18, further comprising assigning on of the remote network addresses if the local network address is not available.